

02-0403

1645

PATENT
670001-2002.6

#5

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants(s) : ANDERSEN et al.

U.S. Serial No.: 09/872,505

Filing Date : June 1, 2001

: NUCLEIC ACID FRAGMENTS DERIVED FROM M.
TUBERCULOSIS

App Unit : 1645

745 Fifth Avenue,
New York, NY 10151**EXPRESS MAIL**

Mailing Label Number: EV196818732US

Date of Deposit: February 3, 2003

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" Service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents, Washington, DC 20231.

Edward Nay
(Typed or printed name of person mailing paper or fee)


(Signature of person mailing paper or fee)

RECEIVED
FEB 06 2003
TECH CENTER 1600/2900**INFORMATION DISCLOSURE STATEMENT**Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

The Examiner's attention is respectfully directed to the documents which are set forth on the accompanying form PTO-1449. Since these documents were forwarded to or cited by the Examiner in related parent applications, namely U.S. Serial No. 09/050,739, filed March 30, 1998, U.S. Serial No. 09/246,191, filed December 30, 1998, U.S. Serial No. 09/805,427,

filed March 13, 2001, U.S. Serial No. 08/465,640, filed June 5, 1995, (now U.S. Patent 5,955,077) and U.S. Serial No. 08/569,221, filed June 30, 1994 (now U.S. Patent 6,120,776), and a copy of each of these documents should be in the parent application file, no additional copy is being forwarded with this Information Disclosure Statement. Also enclosed is a copy of the International Search Report for the corresponding PCT application (PCT/DK94/00273), which was mailed on October 13, 1994. Copies of each of the references cited in the International Search Report will be mailed at a later date.

As this Information Disclosure Statement is being filed before the mailing of the first Office Action on the merits, it is believed that no fee is required for entry of this paper. However, the Commissioner is hereby authorized to charge any such fee, or credit any overpayment to Deposit Account 50-0230.

The filing of this Information Disclosure Statement is not an admission that the documents identified herein constitute prior art to the present application.

Applicants respectfully request that the Examiner considers and make of record the documents cited herewith and that a copy of Form PTO-1449 be initialed by the Examiner and returned to the undersigned.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP



By:

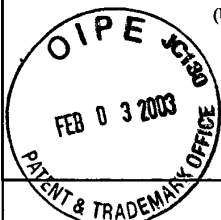
Thomas J. Kowalski, Esq.

Reg. No. 32,147


Tel 212-588-0800

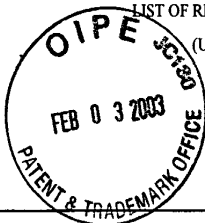
Fax 212-588-0500

Based on Form PTO-1449 (3/90)				ATTY. DOCKET NO. 670001-2002.6		SERIAL NO. 09/872,505	
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT ANDERSEN ET AL.			
				FILING DATE June 1, 2001		GROUP 1645	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	4 891 315	01/1990	Watson et al.			
	AB	4 952 395	08/1990	Shinnick et al.			
	AC	4 976 958	12/1990	Shinnick et al.			
	AD	5 026 546	06/1991	Hilgers et al.			
	AE	5 330 754	07/1994	Kapoor et al.			
	AF	5 559 011	09/1996	Kapoor et al.			
	AG	4 683 578	07/28/87	Betts et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AH	WO 97/09428	3/13/97	WIPO			
	AI	WO 97/09429	3/13/97	WIPO			
	AJ	WO 95/01441	1/12/95	WIPO			
	AK	WO 96/37219	11/28/96	WIPO			
	AL	WO 92 14823	09/1992	WIPO			
	AM	WO 98 53075	11/26/98	WIPO			
	AN	WO 98 53076	11/26/98	WIPO			
	AO	WO 98 44119	10/08/98	WIPO			
	AP	EP 0 734 132	09/25/96	EUROPE			
	AQ	EP 0 729 250	08/28/96	EUROPE			
	AR	EP 0 869 649	10/07/98	EUROPE			
	AS	DE 195 40 250	02/20/97	GERMANY			
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AT	Borodovsky et al., Computers Chem., vol. 17, pp. 123-133					
	AU	Brown, EMBL Sequence database					
EXAMINER				DATE CONSIDERED			
<p>* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>							



RECEIVED
FEB 06 2003
TECH CENTER 1600/2000

Based on Form PTO-1449 (3/90)				ATTY. DOCKET NO. 670001-2002.6		SERIAL NO. 09/872,505	
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT ANDERSEN ET AL.			
				FILING DATE June 1, 2001		GROUP 1645	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AB						
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AC		Harboe et al., Infect. Immun. vol. 64, pp. 16-22				
	AD		Von Heijne et al., J. Mol. Biol., vol. 173, pp. 243-251				
	AE		Hochstrasser et al., Annal Biochem., vol. 173, pp. 424-435				
	AF		Kohler et al., Nature, vol. 256, pp. 495-497				
	AG		Li et al., Infect. Immun., vol. 61, pp. 1730-1734				
	AH		Lindblad et al., Infect. Immun., vol. 65, pp. 623-629				
	AI		Mahairs et al., J. Bacteriol., vol. 178, pp. 1274-1282				
	AJ		Nagai et al., Infect. Immun., vol. 59, pp. 372-382				
	AK		Oettinger et al., Infect. Immun., vol. 62, pp. 2058-2064				
	AL		Ohara et al., Scand. J. Immunol., vol. 41, pp. 433-442				
	AM		Pal et al., Infect. Immun., vol. 60, pp. 4781-92				
	AN		Pearson et al., Proc. Natl. Acad. Sci., USA, vol. 85, pp. 2444-2448				
	AO		Ploug et al., Anal Biochem., vol. 181, pp. 33-39				
	AP		Porath et al., FEBS Lett., vol. 185, pp. 306-310				
	AQ		Roberts et al., Immunol., vol. 85, pp. 502-508				
	AR		Rosenkrands et al., Infect. Immun., vol. 66, no. 6, pp. 2728-2735				
	AS		Andersen et al., J. Immunol. vol. 154, pp. 3359-72				
EXAMINER A				DATE CONSIDERED			
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Based on Form PTO-1449 (3/90)				ATTY. DOCKET NO. 670001-2002.6		SERIAL NO. 09/872,505	
<div style="text-align: center;">  </div> <div style="text-align: center;"> LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) </div>				APPLICANT ANDERSEN ET AL.			
				FILING DATE June 1, 2001		GROUP 1645	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AB						
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AC		Rosenkrands et al., EMBL: Y12820				
	AD		Sorensen et al., Infect. Immun., vol. 63, pp. 1710-1717				
	AE		Theisen et al., Clinical and Diagnostic Laboratory Immunology, vol. 2, pp. 30-34				
	AF		Valdes-Stauber et al., Appl. Environ. Microbiol., vol. 60, pp. 3809-3814				
	AG		Valdes-Stauber et al., Appl. Environ. Microbiol., vol. 62, no 4, pp. 1283-1286				
	AH		Williams, Science, 272:27				
	AI		Young et al., Proc. Natl. Acad. Sci. USA, vol. 82, pp. 2583-2587				
	AJ		Crabtree et al., EMBL Sequence database				
	AK		Van Dyke et al., Gene, pp. 99-104				
	AL		Gosselin et al., J. Immunol., vol. 149, pp. 3477-3481				
	AM		XP002092185 EMBL Sequence				
	AN		Andersen et al., J. Immunol. Methods, vol. 161, pp. 29-39				
	AO		Andersen et al., Infect. Immun., vol. 60, pp. 2317-2323				
	AP		Rosenkrands et al., EMBL: 007812				
	AQ		Wiegshauss, E.H., et al. "Evaluation of the Protective Protency of New Tuberculosis Vaccines", Reviews of Infectious Diseases, Vol. 11, supplement 2, pages S484-S490, March 1989				
	AR		Orme, I.M., "New Vaccines against Tuberculosis", Infectious Disease Clinic of North America, Vol. 13, No. 1, pages 169-185, March 1999				
	AS		Andersen, Infect. Immun. vol. 62, pp. 2536-44				
	AT		Barkholt et al., Anal. Biochem., vol. 177, pp. 318-322				
EXAMINER				DATE CONSIDERED			
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

RECEIVED

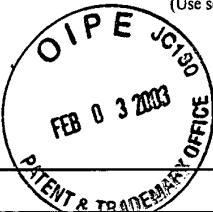
FEB 06 2003


TECH CENTER 1800/2900

Sheet 4 of 6

Based on Form PTO-1449 (3/90)				ATTY. DOCKET NO. 670001-2002.6		SERIAL NO. 09/872,505	
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) <div style="border: 1px solid black; border-radius: 50%; padding: 10px; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 10px auto;"> OIPE JC180 FEB 03 2003 PATENT & TRADEMARK OFFICE </div>				APPLICANT ANDERSEN ET AL.			
				FILING DATE June 1, 2001		GROUP 1645	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AB						
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AC		SCANDINAVIAN JOURNAL OF IMMUNOLOGY vol. 36, 1992 pages 823 - 831 P. ANDERSEN ET AL. 'Identification of immunodominant antigens during infection with Mycobacterium tuberculosis'				
	AD		INFECTION AND IMMUNITY vol. 61, no. 3, March 1993, WASHINGTON US pages 844 - 851 PETER ANDERSEN ET AL. 'Specificity of a protective memory immune response against Mycobacterium tuberculosis'				
	AE		INFECTION AND IMMUNITY vol. 59, no. 4, April 1991, WASHINGTON US pages 1558 - 1563 PETER ANDERSEN ET AL. 'T-cell proliferative response to antigens secreted by Mycobacterium tuberculosis' cited in the application				
	AF		INFECTION AND IMMUNITY vol. 60, no. 7, July 1992, WASHINGTON US pages 2880 - 2886 KRIS HUYGEN ET AL. 'Spleen cell cytokine secretion in Mycobacterium bovis BCG-infected mice'				
	AG		INFECTION AND IMMUNITY vol. 59, no. 6, June 1991, WASHINGTON US pages 1905 - 1910 PETER ANDERSEN ET AL. 'Proteins released from Mycobacterium tuberculosis during growth' cited in the application				
	AH		INFECTION AND IMMUNITY vol. 56, no. 12, December 1988, WASHINGTON US pages 3046 - 3051 CHRISTIANE ABOU-ZEID ET AL. 'Characterization of fibronectin-binding antigens released by Mycobacterium tuberculosis and Mycobacterium bovis BCG'				
	AI		INFECTION AND IMMUNITY vol. 57, no. 10, October 1989, WASHINGTON US pages 3123 - 3130 MARTINE BORREMANS ET AL. 'Cloning sequence determination, and expression of a 32-kilodalton-protein gene of Mycobacterium tuberculosis'				
	AJ		INFECTION AND IMMUNITY vol. 62, no. 6, June 1994, WASHINGTON US pages 2536 - 2544 PETER ANDERSEN 'Effective vaccination of mice against Mycobacterium tuberculosis infection with a soluble mixture of secreted mycobacterial proteins'				
	AK		MORIYAMA S ET AL.: "DIGITAL TRANSMISSION OF HIGH BIT RATE SIGNALS USING 16DAPSK-OFDM MODULATION SCHEME" IEEE TRANSACTIONS ON BROADCASTING, March 1998, vol. 44, no. 1, pages 115-122, XP002105431				
EXAMINER				DATE CONSIDERED			
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

00109436

Based on Form PTO-1449 (3/90)				ATTY. DOCKET NO. 670001-2002.6		SERIAL NO. 09/872,505	
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT ANDERSEN ET AL.			
 <div style="position: absolute; top: 10%; left: 10%; font-size: 2em; font-weight: bold; opacity: 0.5;">RECEIVED</div> <div style="position: absolute; top: 20%; left: 10%;">FEB 06 2003</div> <div style="position: absolute; top: 20%; left: 30%;">June 1, 2001</div> <div style="position: absolute; top: 25%; left: 10%; font-weight: bold;">TECH CENTER 1600/2900</div>				FILING DATE		GROUP	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
AA							
FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES NO	
AB							
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
AC		Man et al. "Treatment of human muscle creatine kinase with glutaraldehyde preferentially increases the immunogenicity of the native conformation and permits production of high-affinity monoclonal antibodies which recognize two distinct surface epitopes", J, Oct. 1, 1989					
AD		A.B. Andersen et al., MPB64 Possesses Tuberculosis-Complex'-Specific B- and T-Cell Epitopes, Scand J. Immunol 34, 365-372, 1991					
AE		Anne Worsae et al., Allergenic and Blastogenic Reactivity of Three Antigens from Mycobacterium tuberculosis in Sensitized Guinea Pigs, Infection and Immunity, Dec. 1987, p 2922-2927					
AF		Yamaguchi Ryugi, et al. "Cloning and Characterization of the Gene for immunogenic Protein MPB64 of Mycobacterium bovis BCG" Infection and Immunity 57(1):283-288 (1989)					
AG		Wiker, H.G., et al., "A Family of Cross-Reacting Proteins Secreted by Mycobacterium tuberculosis", Scand J. Immunol. 36:307-319 (1992)					
AH		Leao, S.C., "Tuberculosis: New Strategies for the Development of Diagnostic Tests and Vaccines", Brazilian J. Med. Biol. Res. 26:827-833 (1993)					
AI		Oettner, Thomas, et al., "Cloning and B-Cell-Epitope Mapping of MPT64 from Mycobacterium tuberculosis H37Rv", Infection and Immunity 62(5):2058-2064 (1994)					
AJ		Boswell et al. Computational Molecular Biology, Oxford University Press, pp. 161-178, 1988					
AK		Flesch and Kaufmann, Mycobacterial Growth Inhibition by Interferon-γ-Activated Bone Marrow Macrophages and Differential ... tuberculosis, The Journal of Immunology, vol. 138, No. 12, pp. 4408-4413, Jun 15, 1987					
AL		Lefford and McGregor, Immunological Memory in Tuberculosis, Cellular Immunology, vol. 14, pp. 417-428, 1974					
AM		Orme, Characteristics and Specificity of Acquired Immunologic Memory to Mycobacterium tuberculosis Infection The Journal of Immunology, vol. 140, No. 10, pp.3589-3593, May 15, 1988					
AN		G.A.W. Rock, The Role of Activated Macrophages in protection and immunopathology in Tuberculosis, Research in Microbiology vol. 141, No. 2, Feb. 1990, pp. 253-256					
EXAMINER				DATE CONSIDERED			
<p>* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>							

Based on Form PTO-1449 (3/90)				ATTY. DOCKET NO. 670001-2002.6		SERIAL NO. 09/872,505	
LIST OF REFERENCES CITED BY APPLICANT <small>(Use several sheets if necessary)</small>				APPLICANT ANDERSEN ET AL.			
				FILING DATE June 1, 2001		GROUP 1645	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AB						
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
			Sanger, Nicklen and Coulson, DNA Sequencing with Chain-Terminating Inhibitors, Proc. Natl. Acad. Sci USA, vol. 74, No. 12, pp. 5463-5467, Dec. 1977				
	AC		Young, Bloom, Grosskinsky, Ivanyi, Thomas and Davis, Dissection of Myobacterium Tuberculosis antigens Using recombinant DNA, Proc. Natl. Acad. Sci. USA, vol. 82, pp 2583-2587, May 1985				
	AD		Kaufman (Microbiological Sciences 4 (11) Nov. 1987 pp. 324-328)				
	AE		Lazar et al. (Molecular & Cellular Bio. Mar. 1988 pp. 1247-1252)				
	AF		Burgess et al (J. of Cell Biology vol. III Nov. 1990 pp. 2129-2138)				
	AG		Salgaller et al. (Cancer Immuno. Imnuother. (1994) vol. 39 pp. 105-116)				
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						
	AO						
EXAMINER				DATE CONSIDERED			
* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

RECEIVED
FEB 06 2003
TECH CENTER 1600/2900